

## **Appendix IV: Profile of Major Recreational Fisheries in the North Central Coast Study Region**

- (a) Commercial passenger fishing vessel
- (b) Private and rental skiff fishing
- (c) Bank and beach fishing
- (d) Fishing from manmade structures
- (e) Consumptive diving (charters and private/shorebased)
- (f) Kayak fishing
- (g) Red abalone



## Appendix IV(a): Commercial passenger vessel fishing

**Fishing mode:** commercial passenger fishing vessel (CPFV)

**Port area:** Bodega Bay, Berkley, Emeryville, Sausalito, San Francisco, Princeton

**Species targeted:** Chinook salmon (king) (*Oncorhynchus tshawytscha*), rockfishes (*Sebastes* spp.), greenling (*Hexagrammos* sp.), lingcod (*Ophiodon elongatus*), California halibut (*Paralichthys californicus*), Pacific sanddab (*Citharichthys sordidus*)

**Estimated number of angler trips from 2004- 2006 in study region by target species:**

	2004 <sup>1</sup>	2005 <sup>1</sup>	2006 <sup>1</sup>
Chinook salmon	63,400	45,800	28,500
Rockfishes	8,374	7,706	19,355
Lingcod	3,007	21	572
California halibut	1,531	268	0

<sup>1</sup>estimates derived from CRFS surveys (except salmon data from the California Department of Fish and Game's Ocean Salmon Project) and include ocean only (<3 miles) catches for all of the Wine and San Francisco districts. The Wine district includes portions of Mendocino County outside of the study region but does not include Tomales Bay (the way in which CRFS estimates are currently made are under revision therefore these are **draft** and will be updated when that information becomes available).

**2004- 2006 estimated catch (number of fish):**

	2004 <sup>1</sup>	2005 <sup>1</sup>	2006 <sup>1</sup>
Chinook salmon	91,400	43,500	27,750
Rockfishes	162,726	73,473	480,432
Lingcod	4,456	7,439	40,029
Cabazon	1,000	1,113	4,754
Kelp greenling	3,022	685	2,291
California halibut	2,231	1,710	0
Pacific sanddabs		3,851	60,716
Dungeness crab <sup>†</sup>	340	1,632	1,915

<sup>1</sup>estimates derived from CRFS surveys (except salmon data from the California Department of Fish and Game's Ocean Salmon Project) and include ocean only (<3 miles) catches for all of the Wine and San Francisco districts. The Wine district includes portions of Mendocino County outside of the study region but does not include Tomales Bay (the way in which CRFS estimates are currently made are under revision therefore these are **draft** and will be updated when that information becomes available)

<sup>†</sup>Dungeness crab catches represent actual catch, not estimates, reported in logbooks.

**2004- 2006 estimated catch (pounds of fish):**

	2004 <sup>1</sup>	2005 <sup>1</sup>	2006 <sup>1</sup>
Chinook salmon	Not available		
Rockfishes	181,126	83,079	624,773
Lingcod	37,092	52,985	324,613
Cabazon	4,049	4,957	22,576
Kelp greenling	3,511	906	2,754
California halibut	31,851	19,793	3
Pacific sanddabs		602	12,298
Dungeness crab	Not available		

<sup>1</sup> estimates derived from CRFS surveys (except salmon data from the California Department of Fish and Game's Ocean Salmon Project) and include ocean only (<3 miles) catches for all of the Wine and San Francisco districts. The Wine district includes portions of Mendocino County outside of the study region but does not include Tomales Bay (the way in which CRFS estimates are currently made are under revision therefore these are **draft** and will be updated when that information becomes available).

**Comments:** Seasonal restrictions are in effect to keep the catch of nearshore groundfish species within harvest guidelines. Depth restrictions are in place primarily to reduce the incidental take of canary rockfish. Catches of salmon declined from 2004 to 2006. Beginning in 2005, ocean salmon fisheries were more restrictive to protect Klamath fall Chinook. Sanddab catches and effort during this period were highest in 2006. It is likely that the increase in effort placed on sanddabs is due in part to the reduced salmon season. Similarly, no Dungeness crab were reported in logbook catches on CPFV trips that targeted salmon in 2004 or 2005. However, in 2006 Dungeness crab were reported in catches on trips that targeted salmon. Annual catch of albacore fluctuates widely due to the availability of fish within a reasonable distance from harbors and launch ramps. Albacore catches were only reported for 2004 with no catches reported in the CRFS database from 2005-2006.

**Primary fishing depth range:** 0 – 30 fathoms for rockfishes, lingcod, cabezon, kelp greenling, California halibut, Pacific sanddabs, king salmon (rockfish, lingcod, and cabezon fishing could occur at greater depths if permitted) and 0 – 5 fathoms for albacore.

**Primary habitat type(s):** Rockfishes, lingcod, cabezon, kelp greenling: kelp beds, rocky reef, hard bottom; California halibut, Pacific sanddabs: sand, other soft bottom; Chinook salmon: nearshore surface waters; Albacore: offshore surface waters

**Primary area of fishery:** State waters \_\_X\_\_ (all but albacore)  
Federal waters \_\_X\_\_ (albacore)

**Synopsis of regulations applicable to north central coast study region:**

Rockfishes, cabezon, kelp greenling, and lingcod: In 2007, north of Pigeon Point, the season for rockfishes, cabezon, kelp or rock greenling, and lingcod is closed January 1 through May 31 and December 1-31. The season can close early if harvest guidelines are reached. North of Pigeon Point, fishing is prohibited in depths greater than 30 fathoms and in depths less than 10 fathoms around the Farallon Islands and Noonday Rock. Waters of Cordell Bank less than 100

fathoms in depth are closed to fishing at all times. An exception to these regulations is that sanddabs and “other flatfishes” may be taken at depths greater than 30 fathoms and less than 100 fathoms at Cordell Bank. The following rockfishes may not be taken: canary, cowcod, and yelloweye. The bag limit for rockfishes, cabezon, and kelp greenling is 10 fish in combination, all of which may be the same species, except no more than 1 cabezon, 2 kelp or rock greenling, and 1 bocaccio may be taken within this overall bag limit. The bag limit for lingcod is 2 fish.

Minimum legal size: rockfish: none, except bocaccio 10 inches; cabezon 15 inches; kelp or rock greenling 12 inches; lingcod 24 inches. Not more than two hooks and one line may be used.

Salmon: Two salmon per day of any species except coho (silver). Steelhead trout may not be taken or possessed. In 2006, the season was open from April 1 through 30 (inside 3 miles of shoreline), May 1 through June 11, June 14 through July 9, and July 12 through November 12. In 2007 the season opened April 7. The bag limit is 2 fish. Minimum legal size: 20 inches. No sinkers or weights exceeding 4 pounds may be used, except that a fishing line may be attached to a sinker or weight of any size if such sinker or weight is suspended by a separate line and the fishing line is released automatically by a mechanical device from the sinker or weight when any fish is hooked. Only two single-point, single-shank barbless hooks may be used to take salmon and anglers fishing for salmon or fishing from a boat or other floating device with salmon on board may not use more than one fishing rod and/or line. Barbless circle hooks must be used when fishing with bait and angling by any other means than trolling.

Surfperch: Fishing for surfperch is open year round, with the exception of shiner surfperch (*Cymatogaster aggregata*), which may not be taken or possessed in San Francisco Bay and San Pablo Bay between April 1 and July 31. In San Francisco Bay and San Pablo Bay, the aggregate limit is five surfperch, not including shiner surfperch. For all other areas, the aggregate limit is 20 surfperch, not including shiner surfperch. Not more than 10 surfperch may be of any one species. The special limit for shiner surfperch is 20, which may be taken or possessed in addition to the overall daily bag limit of 20 finfish. Minimum legal size: none, except redbtail surfperch: 10.5 inches.

California halibut: The bag limit in waters north of Pigeon Point is 3 fish. Minimum legal size: 22 inches

Pacific sanddabs: There is no bag limit. May be taken or possessed in all depths all year (except in waters less than 10 fathoms deep around the Farallon Islands and Noonday Rock). In closed groundfishing areas or during closed groundfishing periods, Pacific sanddabs may only be taken using no more than 12 No. 2 or smaller hooks and no more than 2 pounds of weight.

Albacore: There is no bag limit.

Dungeness Crab: Season starts the first Saturday of November through June 30. Limit is 6 crabs per passenger. Not more than 60 traps are authorized to be used per CPFV. Minimum

legal size: 6 inches (measured by the shortest distance through the body from edge of shell to edge of shell directly in front of and excluding the points (lateral spines)). On CPFVs there is a bag limit for the boat, excluding the vessel operator and crew. The boat bag limit is the number of anglers on board multiplied by the individual bag limit.

**Relevant spatially-explicit data concerning location of fishery:** The California Department of Fish and Game has compiled spatially-explicit data within the MLPA Initiative north central coast study region from the California Recreational Fisheries Survey program involving the CPFV industry from 2004 to 2006. This information is presented for the rockfish complex, California halibut, and salmon as Map 11. These data are presented on microblock (one minute of latitude by one minute of longitude) maps with colors representing the total number of landed fish to each microblock. This will provide an estimate of the relative number of fish landed in discrete locations, which is in turn an estimate of the relative value of particular locations to the CPFV industry.

## Appendix IV(b): Private and rental skiff fishing

**Fishing mode:** private and rental skiff

**Port area:** Bodega Bay, Tomales Bay, Berkley, Emeryville, San Francisco, Sausalito, Princeton

**Species targeted:** Chinook salmon (king) (*Oncorhynchus tshawytscha*), rockfishes (*Sebastes* spp.), lingcod (*Ophiodon elongatus*), California halibut (*Paralichthys californicus*), albacore (*Thunnus alalunga*), Pacific sanddab (*Citharichthys sordidus*)

**Estimated number of fishing trips from 2004- 2006 in study region by target species:**

	2004 <sup>1</sup>	2005 <sup>1</sup>	2006 <sup>1</sup>
Chinook salmon	42,700	39,000	28,700
Rockfishes	20, 669	22,397	39,907
Lingcod	1,731	7,420	4,624
California halibut	3,820	15,003	11,228

<sup>1</sup>estimates derived from CRFS surveys (except salmon data from the California Department of Fish and Game's Ocean Salmon Project) and include ocean only (<3 miles) catches for all of the Wine and San Francisco districts. The Wine district includes portions of Mendocino County outside of the study region but does not include Tomales Bay (the way in which CRFS estimates are currently made are under revision therefore these are **draft** and will be updated when that information becomes available).

**2004 - 2006 estimated catch (number of fish):**

	2004 <sup>1</sup>	2005 <sup>1</sup>	2006 <sup>2</sup>
Chinook salmon	38,800	29,300	21,600
Rockfishes	159,898	227,528	198,767
Lingcod	6,647	28,738	15,889
Cabazon	6,318	7,915	2,676
Kelp greenling	7,202	2,442	3,587
California halibut	4,438	6,582	3,846
Albacore	3,814	984	2,508
Pacific sanddabs	1,741	934	2,008

<sup>1</sup>estimates derived from CRFS surveys (except salmon data from the California Department of Fish and Game's Ocean Salmon Project) and include ocean only (<3 miles) catches for all of the Wine and San Francisco districts. The Wine district includes portions of Mendocino County outside of the study region but does not include Tomales Bay (the way in which CRFS estimates are currently made are under revision therefore these are **draft** and will be updated when that information becomes available).

<sup>2</sup>estimates derived from CRFS surveys, includes ocean only catches, excluding sites within San Francisco Bay and Tomales Bay (the way in which CRFS estimates are currently made are under revision therefore, these are **draft** and will be updated when that information becomes available).

**2004 - 2006 estimated catch (pounds of fish):**

	2004 <sup>1</sup>	2005 <sup>1</sup>	2006 <sup>1</sup>
Chinook salmon	Not available		
Rockfishes	231,310	350,302	451,040
Lingcod	66,841	216,637	195,580
Cabazon	27,861	38,042	19,125
Kelp greenling	10,244	3,142	8,853
California halibut	51,752	80,232	47,701
Albacore	61,345	18,694	52,956
Pacific sanddabs	519	281	977

<sup>1</sup>estimates derived from CRFS surveys (except salmon data from the California Department of Fish and Game's Ocean Salmon Project) and include ocean only (<3 miles) catches for all of the Wine and San Francisco districts. The Wine district includes portions of Mendocino County outside of the study region but does not include Tomales Bay (the way in which CRFS estimates are currently made are under revision therefore these are **draft** and will be updated when that information becomes available).

**Comments:** Seasonal restrictions are in effect to keep the catch of nearshore groundfish species within harvest guidelines. Depth restrictions are in place primarily to reduce the incidental take of canary rockfish. Annual catch of albacore fluctuates widely due to the availability of fish within a reasonable distance from harbors and launch ramps.

**Primary fishing depth range:** 0 – 30 fathoms for rockfishes, lingcod, cabazon, kelp greenling, California halibut, Pacific sanddabs, king salmon (rockfish, lingcod, and cabazon fishing could occur at greater depths if permitted)  
0 – 5 fathoms for albacore

**Primary habitat type(s):** Rockfishes, lingcod, cabazon, kelp greenling: kelp beds, rocky reef, hard bottom; California halibut, Pacific sanddabs: sand, other soft bottom; Chinook salmon: nearshore surface waters; Albacore: offshore surface waters

**Primary area of fishery:** State waters ☒ (all but albacore)  
Federal waters ☒ (albacore)

### **Synopsis of regulations applicable to north central coast study region:**

Rockfishes, cabazon, kelp greenling, and lingcod: In 2007, north of Pigeon Point, the season for rockfishes, cabazon, kelp or rock greenling, and lingcod is closed January 1 through May 31 and December 1-31. The season can close early if harvest guidelines are reached. North of Pigeon Point, fishing is prohibited in depths greater than 30 fathoms and in depths less than 10 fathoms around the Farallon Islands and Noonday Rock. Waters of Cordell Bank less than 100 fathoms in depth are closed to fishing at all times. An exception to these regulations is that sanddabs and "other flatfishes" may be taken at depths greater than 30 fathoms and less than 100 fathoms at Cordell Bank. The following rockfishes may not be taken: canary, cowcod, yelloweye. The bag limit for rockfishes, cabazon, and kelp greenling is 10 fish in combination, all of which may be the same species, except no more than 1 cabazon, 2 kelp or rock greenling, and 1 bocaccio may be taken within this overall bag limit. The bag limit for lingcod is 2 fish. Minimum legal size: rockfish: none, except bocaccio 10 inches; cabazon 15 inches; kelp or rock greenling 12 inches; lingcod 24 inches. In closed groundfishing areas or during closed



groundfishing periods, Pacific sanddabs may only be taken using no more than 12 No. 2 or smaller hooks and no more than 2 pounds of weight.

Salmon: Two salmon per day of any species except coho (silver). Steelhead trout may not be taken or possessed. In 2006, the season was open from April 1 through 30 (inside 3 miles of shoreline), May 1 through June 11, June 14 through July 9, and July 12 through November 12. In 2007 the season opened April 7. The bag limit is 2 fish. Minimum legal size: 20 inches. No sinkers or weights exceeding 4 pounds may be used, except that a fishing line may be attached to a sinker or weight of any size if such sinker or weight is suspended by a separate line and the fishing line is released automatically by a mechanical device from the sinker or weight when any fish is hooked. Only two single-point, single-shank barbless hooks may be used to take salmon and anglers fishing for salmon or fishing from a boat or other floating device with salmon on board may not use more than one fishing rod and/or line. Barbless circle hooks must be used when fishing with bait and angling by any other means than trolling.

Surfperch: Fishing for surfperch is open year round, with the exception of shiner surfperch (*Cymatogaster aggregata*), may not be taken or possessed by a person in San Francisco Bay and San Pablo Bay between April 1 and July 31. In San Francisco Bay and San Pablo Bay, the aggregate limit is five surfperch, not including shiner surfperch. For all other areas, the aggregate limit is 20 surfperch, not including shiner surfperch. Not more than 10 surfperch may be of any one species. The special limit for shiner surfperch is 20, which may be taken or possessed in addition to the overall daily bag limit of 20 finfish. Minimum legal size: none, except redbait surfperch: 10.5 inches.

California halibut: The bag limit in waters north of Pigeon Point is 3 fish. Minimum legal size: 22 inches.

Pacific sanddabs: There is no bag limit. May be taken or possessed in all depths all year (except in waters less than 10 fathoms deep around the Farallon Islands and Noonday Rock). In closed groundfishing areas or during closed groundfishing periods, Pacific sanddabs may only be taken using no more than 12 No. 2 or smaller hooks and no more than 2 pounds of weight.

Albacore: There is no bag limit.

Dungeness Crab: Season starts the first Saturday of November through June 30. Limit is 10 crabs per person. Minimum legal size: 5 3/4 inches (measured by the shortest distance through the body from edge of shell to edge of shell directly in front of and excluding the points (lateral spines)).

**Relevant spatially-explicit data concerning location of fishery:** The California Department of Fish and Game has compiled spatially-explicit data within the MLPA Initiative north central coast study region from 2004, the first year of the California Recreational Fisheries Survey program. While these data are depth-limited in scope for bottom-oriented fishes due to regulations, they are the only data available with this degree of resolution for private and rental

boat fishing. These data will be presented on microblock (one minute of latitude by one minute of longitude) maps with colors representing the total number of sampled trips targeting the rockfish complex, California halibut, and salmon to each microblock (Map 12). It is important to note that these data include fishing trips in which no catch occurred. The microblocks compiled in this data set are those reported by the fishermen to the samplers.

## Appendix IV(c): Bank and beach fishing

**Fishing mode:** beach and bank (shore-based)

**Port area:** Point Arena, Anchor Bay, Ocean Cove, Timber Cove, Fort Ross, Goat Rock, Doran, Lawson's Landing, Point Reyes, Baker Beach, Pillar, Princeton, and Half Moon Bay

**Primary species harvested:** Barred surfperch (*Amphistichus argenteus*), Surfsmelt (*Hypomesus pretiosus*), Rockfish (*Sebastes* sp.), Jacksmelt (*Atherinopsis californiensis*), Striped bass (*Morone saxatilis*), Redtail surfperch (*Amphistichus rhodoterus*), Silver surfperch (*Hyperprosopon ellipticum*), Northern anchovy (*Engraulis mordax*), Cabezon (*Scorpaenichthys marmoratus*), Shiner perch (*Cymatogaster aggregata*), Kelp greenling (*Hexagrammos decagrammus*), Walleye surfperch (*Hyperprosopon argenteum*), Striped seaperch (*Embiotoca lateralis*)

**Estimated number of angler trips from 2004- 2006 in study region:** 300,533\*

\*estimate derived from CRFS surveys, include the San Francisco and Wine districts. The Wine district includes Sonoma and Mendocino counties with portions of Mendocino outside the study region (these are **draft** and will be updated to include only those portions within the study region when that information becomes available)

**2004- 2006 estimated catch of most frequently observed species (number of fish):**

	2004 <sup>1</sup>	2005 <sup>1</sup>	2006 <sup>1</sup>
Barred surfperch	10,279	25,184	20,240
Surfsmelt		19,268	29,210
Rockfish <sup>2</sup>	14,978	13,051	16,356
Jacksmelt	5,849	23,298	14,786
Striped bass		30,677	8,616
Redtail surfperch	5,394	13,272	8,249
Silver surfperch	4,080	3,406	12,545
Northern anchovy			15,238
Cabezon	4,560	3,294	404
Shiner perch	758	3,959	3,085
Kelp greenling	3,245	1,780	3,081
Walleye surfperch	182	5,490	2,019
Striped seaperch	5,190	4,784	5,408

<sup>1</sup>estimates derived from CRFS surveys, include the San Francisco and Wine districts. The Wine district includes Sonoma and Mendocino counties with portions of Mendocino outside the study region (these are **draft** and will be updated to include only those portions within the study region when available).

<sup>2</sup>Blue rockfish accounted for 39%, 45%, and 79% of the total rockfish catch for 2004, 2005, and 2006 respectively.

**2004- 2006 estimated catch of most frequently observed species (pounds of fish):**

	2004 <sup>1</sup>	2005 <sup>1</sup>	2006 <sup>1</sup>
Barred surfperch	8,595	18,674	15,425

	2004 <sup>1</sup>	2005 <sup>1</sup>	2006 <sup>1</sup>
Surfsmelt		632	3,498
Rockfish	40,503	8,773	15,289
Jacksnelt	4,200	13,514	8,594
Striped bass		215,160	81,192
Redtail surfperch	5,991	14,931	7,665
Silver surfperch	1,141	786	4,222
Northern anchovy			389
Cabazon	19,164	13,750	1,177
Shiner perch	184	489	
Kelp greenling	4,510	615	3,162
Walleye surfperch	62	2,345	650
Striped seaperch	6,572	6,887	7,222

<sup>1</sup>estimates derived from CRFS surveys, include the San Francisco and Wine districts. The Wine district includes Sonoma and Mendocino counties with portions of Mendocino outside the study region (these are **draft** and will be updated to include only those portions within the study region when available).

**Comments:** There are no seasonal restrictions on fishing from shore, except as related to the take of lingcod (see below). The majority of the catch is reported under the target species classifications of “striped bass”, “surfperches”, or “anything”. Catches are often opportunistic and may also reflect seasonal availability of some species.

**Primary fishing depth range:** 0 – 2 fathoms

**Primary habitat type(s):** Intertidal and shallow subtidal areas of sandy beaches and rocky shoreline.

**Primary area of fishery:** State waters ☒ Federal waters ☐

**Synopsis of regulations applicable to north central coast study region:**

Rockfishes, cabezon, kelp greenling, and lingcod: When rockfish or lingcod are in possession, only one line with not more than two hooks may be used. Fishing for lingcod from shore is prohibited in January, February, March, and December. The bag limit for rockfishes, cabezon, and kelp greenling is 10 fish in combination, all of which may be the same species, except no more than 1 cabezon, 2 kelp or rock greenling, and 1 bocaccio may be taken within this overall bag limit. The bag limit for lingcod is 2 fish. Minimum legal size: rockfish: none, except bocaccio 10 inches; cabezon 15 inches; kelp or rock greenling 12 inches; lingcod 24 inches. Not more than two hooks and one line may be used.

Surfperch: Fishing for surfperch is open year round, with the exception of shiner surfperch (*Cymatogaster aggregata*), may not be taken or possessed by a person in San Francisco Bay and San Pablo Bay between April 1 and July 31. In San Francisco Bay and San Pablo Bay, the aggregate limit is five surfperch, not including shiner surfperch. For all other areas, the aggregate limit is 20 surfperch, not including shiner surfperch. Not more than 10 surfperch may be of any one species. The special limit for shiner surfperch is 20, which may be taken or

possessed in addition to the overall daily bag limit of 20 finfish. Minimum legal size: none, except redbtail surfperch: 10.5 inches

California halibut: The bag limit in waters north of Pigeon Point is 3 fish. Minimum legal size: 22 inches.

Pacific sanddabs: There is no bag limit. In closed groundfishing areas or during closed groundfishing periods, Pacific sanddabs may only be taken using no more than 12 No. 2 or smaller hooks and no more than 2 pounds of weight.

Other species: There is no bag limit on the following species which are likely to be taken from manmade structures in central California: anchovy, jacksmelt, topsmelt, jack mackerel, Pacific mackerel, Pacific staghorn sculpin, and Pacific sardine. The bag limit for white croaker is 10 fish.

**Relevant spatially-explicit data concerning location of fishery:** Spatial information is collected in the beach and bank mode; however, samples are assigned to long stretches of coast and therefore are not presented graphically. The more commonly used sites are presented in Map 14 as access points.

## Appendix IV(d): Fishing from manmade structures

**Fishing mode:** manmade structures (piers and jetties)

**Port area:** Doran, Lawson's pier, Fort Baker, Pacifica pier, Princeton pier and jetty

**Primary species harvested:** Northern anchovy (*Engraulis mordax*), Shiner surfperch (*Cymatogaster aggregata*), White croaker (*Genyonemus lineatus*), Chub (pacific) mackerel (*Scomber japonicus*), Pacific sardine (*Sardinops sagax*), American shad (*Alosa sapidissima*), Jacksmelt (*Atherinopsis californiensis*), Walleye surfperch (*Hyperprosopon argenteum*), Grass rockfish (*Sebastes rastrelliger*), Barred surfperch (*Amphistichus argenteus*), Spotfin surfperch (*Hyperprosopon anale*)

**Estimated number of angler trips in 2006 in study region:** 280,917\*

\*estimates derived from CRFS surveys, includes ocean only catches, excluding sites within San Francisco Bay and Tomales Bay (the way in which CRFS estimates are currently made are under revision therefore, these are **draft** and will be updated when that information becomes available – anticipated to be late May 2007)

**2006 estimated catch of most frequently observed species (number of fish):**

	2004 <sup>1</sup>	2005 <sup>1</sup>	2006 <sup>2</sup>
Northern anchovy	18,606	1,512	133,824
Shiner perch	65,047	15,773	20,655
White croaker	55,311	25,323	18,799
Chub (pacific) mackerel			14,303
Pacific sardine	11,313		6,644
American shad			6,346
Jacksmelt	13,745	6,760	9,678
Walleye surfperch	9,355	12,995	3,757
Grass rockfish	1,542	2,723	7,397
Barred surfperch	1,959	987	2,538
Spotfin surfperch		219	2,437
Striped bass	577	1,196	24

<sup>1</sup>estimates derived from CRFS surveys, include the San Francisco and Wine districts. The Wine district includes Sonoma and Mendocino counties with portions of Mendocino outside the study region (these are **draft** and will be updated to include only those portions within the study region when available)

<sup>2</sup>estimates derived from CRFS surveys, includes ocean only catches, excluding sites within San Francisco Bay and Tomales Bay (the way in which CRFS estimates are currently made are under revision therefore, these are **draft** and will be updated when that information becomes available – anticipated to be late May 2007)

**2006 estimated catch of most frequently observed species (pounds of fish):**

	2004 <sup>1</sup>	2005 <sup>1</sup>	2006 <sup>2</sup>
Northern anchovy	469	33	3,618
Shiner perch	4,852	1,043	1,242

	2004 <sup>1</sup>	2005 <sup>1</sup>	2006 <sup>2</sup>
White croaker	22,957	11,247	7,025
Chub (pacific) mackerel			5,007
Pacific sardine	920		785
American shad			575
Jacksmelt	5,587	2,680	3,356
Walleye surfperch	2,106	2,589	785
Grass rockfish	1,103	2,915	5,772
Barred surfperch	881	324	932
Spotfin surfperch		13	213
Striped bass	3,943	9,158	45

<sup>1</sup>estimates derived from CRFS surveys, include the San Francisco and Wine districts. The Wine district includes Sonoma and Mendocino counties with portions of Mendocino outside the study region (these are **draft** and will be updated to include only those portions within the study region when available)

<sup>2</sup>estimates derived from CRFS surveys, includes ocean only catches, excluding sites within San Francisco Bay and Tomales Bay (the way in which CRFS estimates are currently made are under revision therefore, these are **draft** and will be updated when that information becomes available)

**Comments:** There are no seasonal restrictions on fishing from manmade structures, except as related to the take of lingcod and salmon(see below). The majority of the catch is reported under the target species classification of “anything”. Catches are often opportunistic and may also reflect seasonal availability of some species. More than 75% of effort occurs during May through September.

**Primary fishing depth range:** 0 – 2 fathoms

**Primary habitat type(s):** sand, other soft bottom around piers and breakwaters, and the microhabitats of the structures themselves.

**Primary area of fishery:** State waters ☒ Federal waters ☐

**Synopsis of regulations applicable to north central coast study region:** A license is not required to fish from a public pier, public jetty, or a public breakwater in ocean or bay waters. On public piers no person shall use more than two rods and lines or two hand lines.

Rockfishes, cabezon, kelp greenling, and lingcod: Fishing for rockfishes, cabezon, and kelp greenling is permitted year-round from manmade structures. When rockfish or lingcod are in possession, only one line with not more than two hooks may be used. Fishing for lingcod from shore is prohibited in January, February, March, and December. The bag limit for rockfishes, cabezon, and kelp greenling is 10 fish in combination, all of which may be the same species, except no more than 1 cabezon, 2 kelp or rock greenling, and 1 bocaccio may be taken within this overall bag limit. The bag limit for lingcod is 2 fish. Minimum legal size: rockfish: none, except bocaccio 10 inches; cabezon 15 inches; kelp or rock greenling 12 inches; lingcod 24 inches. Not more than two hooks and one line may be used.

Salmon: Two salmon per day of any species except coho (silver). Steelhead trout may not be taken or possessed. In 2006, season closed January 1 through March 31, June 12 through

June 13, July 10 through July 11, and November 13 through December 31. In 2007 the season opened April 7. The bag limit is 2 fish. Minimum legal size: 20 inches. Salmon may not be taken by snagging

Surfperch: Fishing for surfperch is open year round, with the exception of shiner surfperch (*Cymatogaster aggregata*), may not be taken or possessed by a person in San Francisco Bay and San Pablo Bay between April 1 and July 31. In San Francisco Bay and San Pablo Bay, the aggregate limit is five surfperch, not including shiner surfperch. For all other areas, the aggregate limit is 20 surfperch, not including shiner surfperch. Not more than 10 surfperch may be of any one species. The special limit for shiner surfperch is 20, which may be taken or possessed in addition to the overall daily bag limit of 20 finfish. Minimum legal size: none, except redbtail surfperch: 10. 5 inches.

California halibut: The bag limit in waters north of Pigeon Point is 3 fish. Minimum legal size: 22 inches.

Pacific sanddabs: There is no bag limit. Up to 12 No. 2 or smaller hooks and up to 2 pounds of weight may be used.

Other species: There is no bag limit on the following species which are likely to be taken from manmade structures in central California: anchovy, jacksmelt, topsmelt, jack mackerel, Pacific mackerel, Pacific staghorn sculpin, and Pacific sardine. The bag limit for white croaker is 10 fish.

**Relevant spatially-explicit data concerning location of fishery:** Spatial information is collected in the man-made mode at the interview site; however, estimates are made by county rather than site and therefore are not presented graphically. The more commonly used sites are presented in Map 14 as access points.



## Appendix IV(e): Consumptive diving (charters and private/ shorebased)

**Fishing mode:** scuba diving and free diving

**Port area:** Half Moon Bay, San Francisco Bay, Bodega Bay, Tomales Bay

**Species targeted:** Blue rockfish (*Sebastes mystinus*), Black rockfish (*Sebastes melanops*), rockfishes (*Sebastes* spp.), sanddabs (*Citharichthys* sp.), Lingcod (*Ophiodon elongatus*), Dungeness crab (*Cancer magister*), Pacific mackerel (*Scomber japonicus*), Cabezon (*Scorpaenichthys marmoratus*), California halibut (*Paralichthys californicus*), Kelp greenling (*Hexagrammos decagrammus*)

**Reported number of charter boat dive trips in study region:** In 2004 only 4 dive charters submitted logbooks in which they indicated it was a dive trip. In 2005 and 2006, 23 and 84 trips, respectively, indicated diving in logbooks submitted.

**Reported catch of most frequently observed species (number of fish):**

	Dive Charters			Private / Shorebased		
	2004	2005	2006	2004	2005	2006
Blue rockfish	155	2,031	6,477			
Black rockfish	-	476	2,827			
Rockfish sp.	639	1,110	4,326			
Sanddab	-	72	1,567			
Lingcod	23	150	750			
Dungeness crab	-	510	42			
Pacific mackerel	-	-	248			
Cabezon	2	33	61			
CA halibut	1	39	52			
Kelp greenling	35	23	47			

**Comments:** Many dive charters either do not submit log books or do not indicate a trip was a dive charter trip. Therefore, the actual number of dive charters is likely to be higher than presented here. Information from stakeholders on private and shorebased consumptive diving is needed.

**Primary depth range:** 0 – 20 fathoms

**Primary habitat type(s):** kelp beds and nearshore rocky reefs or pinacles, nearshore sand bottom (for halibut)

**Primary area of fishery:** State waters ☒ Federal waters ☐

**Synopsis of regulations applicable to north central coast study region:**

Rockfishes, cabezon, kelp greenling, and lingcod: Diving and spearfishing are permitted during seasonal closures for hook-and-line gear. Except for spearfishing gear, all other types of fishing gear are prohibited to be aboard the vessel or non-motorized watercraft while spearfishing for the purpose of retaining groundfish and associated species. Fishing for lingcod is prohibited in January, February, March, and December. The bag limit for rockfishes, cabezon, and kelp greenling is 10 fish in combination, all of which may be the same species, except no more than 1 cabezon, 2 kelp or rock greenling, and 1 bocaccio may be taken within this overall bag limit. The bag limit for lingcod is 2 fish. Minimum legal size: rockfish: none, except bocaccio 10 inches; cabezon 15 inches; kelp or rock greenling 12 inches; lingcod 24 inches.

California halibut: The bag limit in waters north of Point Sur is 3 fish. The bag limit in waters south of Point Sur is 5 fish. Minimum legal size: 22 inches

Pacific sanddabs: There is no bag limit.

Dungeness Crab: Season starts the first Saturday of November through June 30. Limit is 6 crabs per passenger. Not more than 60 traps are authorized to be used per CPFV. Minimum legal size: 6 inches (measured by the shortest distance through the body from edge of shell to edge of shell directly in front of and excluding the points (lateral spines)).

**Relevant spatially-explicit data concerning location of fishery:** Spatially relevant information for consumptive diving will be gathered by MLPA staff and contractors in conjunction with stakeholders

## Appendix IV(f): Kayak fishing

**Fishing mode:** kayak, hook and line, free diving, scuba diving

**Port area:** The following table lists launch sites and fish generally targeted. In addition to finfish red abalone are often sought by free divers from kayaks.

Launch Site	Species Caught
Gualala	rockfish, lingcod, halibut, striped bass, salmon, red abalone
Salt Point	rockfish, halibut, red abalone
Stillwater	rockfish, halibut, red abalone
Fort Ross State Beach	rockfish, halibut, crab, red abalone
Jenner	rockfish, halibut
Bodega	rockfish, salmon, crab
North Beach Rd. (Pt. Reyes)	salmon
South Beach Rd. (Pt. Reyes)	salmon
Chimney Rock	rockfish, halibut, salmon, crab
Drakes Beach	salmon
Bolinas	rockfish, lingcod, halibut, striped bass, salmon, crab
Stinson	rockfish, lingcod, halibut, striped bass, salmon, crab
Muir Beach	rockfish, lingcod, halibut, striped bass, salmon, crab
Linda Mar	rockfish, halibut, striped bass, salmon, crab
Pillar Point Harbor/ Half Moon Bay	rockfish, halibut, salmon, crab
Venice Beach	rockfish, halibut, salmon, crab
Martin's Beach	rockfish, lingcod, halibut, striped bass, salmon, crab
San Gregorio State Beach	rockfish, lingcod, halibut, striped bass, salmon, crab
Pomponio State Beach	rockfish, halibut
Pescadero State Beach	rockfish, halibut
Bean Hollow Launch	rockfish, halibut
Pigeon Point	rockfish, halibut

This information was provided by NorCal Kayak Anglers. Additional launch sites are listed in the following report, [http://www.dfg.ca.gov/mrd/mlpa/pdfs/comments/kfasc\\_030805.pdf](http://www.dfg.ca.gov/mrd/mlpa/pdfs/comments/kfasc_030805.pdf)

**Species targeted:** Chinook salmon (King) (*Oncorhynchus tshawytscha*), rockfishes (*Sebastes* spp.), greenling (*Hexagrammos* sp.), lingcod (*Ophiodon elongatus*), California halibut (*Paralichthys californicus*), striped bass (*Morone saxatilis*), red abalone (*Haliotis rufescens*), and crab (*Cancer* sp.)

**Estimated number of kayak trips in study region:** Some information is captured by CRFS in the beach and bank mode however, additional information is needed from stakeholders.

Reported catch of most frequently observed species (number of fish): Some information is captured by CRFS in the beach and bank mode however, additional information is needed from stakeholders.

**Comments:** Kayak angling is a popular recreational mode of fishing. Due to the multiple use nature of kayak fishing (angling, spear fishing, abalone diving, and crab) it is difficult to quantatively describe this mode of fishing. Therefore, stakeholder input will be necessary.

**Primary depth range:** 0 – 5 fathoms

**Primary habitat type(s):** kelp beds, nearshore rocky reef habitat, and sand flats

**Primary area of fishery:** State waters ☒ Federal waters ☐

**Synopsis of regulations applicable to north central coast study region:**

Rockfishes, cabezon, kelp greenling, and lingcod: In 2007, north of Pigeon Point, the season for rockfishes, cabezon, kelp or rock greenling, and lingcod is closed January 1 through May 31 and December 1-31. The season can close early if harvest guidelines are reached. North of Pigeon Point, fishing is prohibited in depths greater than 30 fathoms and in depths less than 10 fathoms around the Farallon Islands and Noonday Rock. Waters of Cordell Bank less than 100 fathoms in depth are closed to fishing at all times. An exception to these regulations is that sanddabs and “other flatfishes” may be taken at depths greater than 30 fathoms and less than 100 fathoms at Cordell Bank. The following rockfishes may not be taken: canary, cowcod, yelloweye. The bag limit for rockfishes, cabezon, and kelp greenling is 10 fish in combination, all of which may be the same species, except no more than 1 cabezon, 2 kelp or rock greenling, and 1 bocaccio may be taken within this overall bag limit. The bag limit for lingcod is 2 fish. Minimum legal size: rockfish: none, except bocaccio 10 inches; cabezon 15 inches; kelp or rock greenling 12 inches; lingcod 24 inches. In closed groundfishing areas or during closed groundfishing periods, Pacific sanddabs may only be taken using no more than 12 No. 2 or smaller hooks and no more than 2 pounds of weight.

Salmon: Two salmon per day of any species except coho (silver). Steelhead trout may not be taken or possessed. In 2006, the season was open from April 1 through 30 (inside 3 miles of shoreline), May 1 through June 11, June 14 through July 9, and July 12 through November 12. In 2007 the season opened April 7. The bag limit is 2 fish. Minimum legal size: 20 inches. No sinkers or weights exceeding 4 pounds may be used, except that a fishing line may be attached to a sinker or weight of any size if such sinker or weight is suspended by a separate line and the fishing line is released automatically by a mechanical device from the sinker or weight when any fish is hooked. Only two single-point, single-shank barbless hooks may be used to take salmon and anglers fishing for salmon or fishing from a boat or other floating device with salmon on board may not use more than one fishing rod and/or line. Barbless circle hooks must be used when fishing with bait and angling by any other means than trolling.

Surfperch: Fishing for surfperch is open year round, with the exception of shiner surfperch (*Cymatogaster aggregata*), may not be taken or possessed by a person in San Francisco Bay

and San Pablo Bay between April 1 and July 31. In San Francisco Bay and San Pablo Bay, the aggregate limit is five surfperch, not including shiner surfperch. For all other areas, the aggregate limit is 20 surfperch, not including shiner surfperch. Not more than 10 surfperch may be of any one species. The special limit for shiner surfperch is 20, which may be taken or possessed in addition to the overall daily bag limit of 20 finfish. Minimum legal size: none, except redbtail surfperch: 10.5 inches

California halibut: The bag limit in waters north of Pigeon Point is 3 fish. Minimum legal size: 22 inches

Pacific sanddabs: There is no bag limit. May be taken or possessed in all depths all year (except in waters less than 10 fathoms deep around the Farallon Islands). In closed groundfishing areas or during closed groundfishing periods, Pacific sanddabs may only be taken using no more than 12 No. 2 or smaller hooks and no more than 2 pounds of weight.

Albacore: There is no bag limit.

Dungeness Crab: Season starts the first Saturday of November through June 30. Limit is 10 crabs per passenger. Minimum legal size: 5 3/4 inches (measured by the shortest distance through the body from edge of shell to edge of shell directly in front of and excluding the points (lateral spines)).

**Relevant spatially-explicit data concerning location of fishery:** Spatially relevant information for kayak fishing will be gathered by MLPA staff and contractors in conjunction with stakeholders. However, some of the more common access points are presented in Map 14.

## Appendix IV(g): Red abalone

**Fishing mode:** free diving, shore picking

**Port area:** Fort Ross, Fort Ross Reef Camp, Salt Point, Sea Ranch, Arena Cove, Point Reyes, Tomales Point, Bodega Head

**Species targeted:** Red abalone (*Haliotis rufescens*)

**Estimated number of diver trips and annual catch for Sonoma and Mendocino counties\*:**

Year	Estimated # of Dive Trips	Estimated # of Harvested Abalone
2002	97,000	253,000
2003	110,000	249,000
2004	104,000	236,000

\* Data derived from table 3.2 of Appendix 14 - Draft supplement to the final program environmental document - ocean sport fishing regulations concerning abalone. Estimates calculated from 2002-2004 report card sample data and telephone survey data. Estimates for number of dive trips and number of harvested abalone calculated for Mendocino and Sonoma counties. Only the southern portions of Mendocino county are within the study region.

**2002-2005 estimated catch of red abalone (number of abalone) for each site within the study region\*:**

Site	2002	2003	2004	2005
Other Sonoma County <sup>†</sup>	3,328	755 <sup>†</sup>	34 <sup>†</sup>	0
Point Arena Lighthouse	1,673	1,574	4,223	15,602
Arena Cove	12,628	11,917	10,946	7,364
Moat Creek	6,153	7,716	7,522	5,520
Schooner Gulch	587	730	559	803
Saunders Landing	912	1,137	1,769	1,338
Anchor Bay	5,446	6,470	5,593	4,759
Robinson Pt	789	1,311	1,164	605
Gualala Point	1,181	1,311	970	817
Sea Ranch	14,466	13,710	13,115	10,941
Black Point	360	293	171	310
Stewarts Point	2,418	2,458	2,077	1,155
Rocky Point	376	561	285	760
Horseshoe Cove	2,418	2,011	1,860	1,479
Fisk Mill Cove	7,043	7,369	8,127	8,125
Salt Point	11,763	11,738	11,414	8,533
Ocean Cove	5,777	6,664	5,855	5,280
Stillwater Cove	3,643	4,325	2,956	4,872
Timber Cove	8,713	9,221	7,990	8,209

Fort Ross & Reef Camp	36,546	37,429	37,186	32,767
Jenner	1,882	2,344	2,580	2,746
Bodega Head	1,099	1,524	1,016	1,633
Tomales Point	2,873	3,719	2,191	2,211
Point Reyes	622	968	639	465
Other Marin	477	1,028	605	676

\* Catch estimates are preliminary and subject to change upon further evaluation. Estimates derived from submitted California Department of Fish and Game Abalone Report Cards. These catch estimates are believed to be lower than the actual number of abalone harvested from these areas due to a lack of reporting on abalone punch cards.

† In 2003 the site "Other Sonoma" was taken off the report card so that landings were reported as close to the nearest site as possible. However, in 2003 and 2004 many abalone harvesters continued to write in "Other Sonoma".

**Comments:** Due to regulation changes in 2002, prior data are not comparable and therefore only data from 2002 -2005 is presented. In 2002, abalone regulations changed reducing the annual and daily limits of animals that could be harvested, thus affecting landings data after 2002. Many coastal access points utilized for shore based abalone harvesting do not have a site code assigned to them therefore these areas are reported according to the closest site identification code on the abalone punch card. The sites with the greatest catch are Fort Ross and Reef Camp comprising more than 27% of the annual harvest each year. Due to their close proximity the Fort Ross and Reef Camp sites are grouped together on the report cards. Additionally, in the summer of 2004 the Stornetta Ranch, near Point Arena Lighthouse, was opened to the public and has since become one of the more heavily used sites, which may be diverting fisheries effort from traditional areas close to Stornetta Ranch, such as Schooner Gulch and Moat Creek. Catch estimates from Stornetta Ranch are grouped with Point Arena Lighthouse. Other popular sites are Sea Ranch, Arena Cove, and Salt Point.

**Primary depth range:** 0 – 5 fathoms

**Primary habitat type(s):** kelp beds and nearshore rocky reef habitat

**Primary area of fishery:** State waters ☒ Federal waters ☐

**Synopsis of regulations applicable to north central coast study region:** Red abalone (*Haliotis rufescens*) is the only species of abalone in California that may be recreationally harvested. Abalone may only be taken north of a line drawn due west (magnetic) from the center of the mouth of San Francisco Bay.

**Seasonal/Harvest/Gear Restrictions:** The red abalone season is from April 1 through June 30 and from August 1 to November 30. Abalone may only be taken a half hour before sunrise to a half hour after sunset. Daily bag and possession limit is 3 (reduced from 4 starting in 2002). Abalone must be 7 inches or greater measured along the longest shell diameter. Abalone Report Card (punch card) limit is 24 (reduced from 100 starting in 2002). Abalone Report Cards must be returned to the California Department of Fish and Game within 30 days of the close of the season.

**Special Gear Restrictions:** The use of SCUBA gear or surface-supplied air to take abalone is prohibited and take is limited to hand harvest only.

**Relevant spatially-explicit data concerning location of fishery:** The California Department of Fish and Game has compiled more extensive spatially-explicit data for the red abalone fishery since 2002 through the department's Abalone Report Card Program and telephone interviews of permit holders, and has identified significant areas of recreational red abalone harvest with finer resolution. Map 13 provides the estimated catch of abalone by site for the north central coast study region. Since the take of abalone is restricted to 3 per day and 24 annually the estimated catch is reflective of effort/ use for those sites.